Patents: When They Make Sense and When They Do Not

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News stories involving patents appear to be never ending. Some patent lawsuits result in awards in millions, tens of millions, and occasionally hundreds of millions of dollars or more for the patent owners. Some patent lawsuits result in invalidation of patents and assessments of attorney fees against the losing patent owners. Patent law seems to be in constant flux: court cases frequently introduce new changes into the law through their decisions and Congress seems to frequently change the patent law through a series of legislations. Debates rage on whether there are too many patents and whether certain technologies should be even eligible for patenting. All of this can generate some uncertainty as to whether pursuing patents makes sense for an engineer with an invention or the engineer's company. Engineers and companies can benefit from considering several factors when determining whether pursuing patents makes sense.

I. PURPOSES FOR A PATENT

Many possible reasons exist for pursuing patent protection, but it is a mistake to pursue a patent without purpose or not pursue a patent for a lack of forethought. Having an understanding of the purpose in pursuing a patent typically results in a more effective patent and process that better connects to the business of the company and ensures a better use of the engineer's time and energy. Some of the most common reasons for pursuing patent protection are:

- protection against "knockoffs";
- protection against lawsuits by competitors;
- asset building;
- investor expectations;
- marketing.

The most commonly understood reason for pursuing patent protection is to stop competitors from copying an invention, either a direct "knockoff" or the incorporation of the invention into a larger product or service. It almost goes without saying: the less your competitors can sell, the more you can sell. In economic terms, a patent here can be viewed as a "barrier to entry"—patents prevent a competitor from entering the marketplace (or at least the market for the product or service embodying the invention). Patent protection, however, also provides other remedies in addition to, or in alternative to, a complete prohibition. For example, with a patent, the patent owner can also control who and in what manner an invention is used. For example, when licensing a patent, a license can be provided to

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certain companies (e.g., noncompetitors or ancillary competitors) and not to other companies (e.g., direct competitors). A license can also be structured to provide rights in certain technical fields or geographical areas, while retaining rights in the others.

Patents can also provide protection against lawsuits by other patent owners. For example, a competitor may be less willing or completely unwilling to assert patent infringement against a company that owns one or more patents infringed by the competitor. Without any such patents owned by the company, the competitor may feel emboldened to assert patent infringement against the company. With such patents, the competitor may not assert patent infringement against the company. Similarly, if the assertion of patent infringement cannot be avoided and a patent license is the best resolution, the terms of such a patent license are likely to be less favorable in a one-sided license negotiation than would be the case in a cross-license negotiation where both parties owned patents infringed by the other.

Patents can also be viewed as a valuable asset. While it is possible to maintain a patent as a passive asset (particularly when serving the purpose of providing protection against competitor assertions of patent infringement just discussed above), patents can also be actively used to drive value. For example, a patent can be used to generate revenue through licensing. Such licensing revenue can improve return on investment for research and development and can seed continuing innovation. Such revenue can also raise company valuations and can be used in financing (e.g., collateral for loans). Patents can also drive the necessity for or desirability in mergers, acquisitions, and joint ventures.

Patents are often expected by investors, particularly for smaller companies and startups. Patents communicate innovation and uniqueness in the marketplace. The existence of pending patent applications stake out an inventor's or company's position on how they differ from competitors and what competitors should not be allowed to copy. For patent applications that have matured into issued patents, the imprimatur of the examination process by the U.S. Patent Office validates the company's position of uniqueness and specifies what the actual scope of patent protection is.

Finally, patents provide marketing value to the patent owner. Marking a product as "patent pending" (for a pending patent application) or with the patent number (for an issued patent), patent marking communicates to consumers the uniqueness of the product or service. Such patent marking also notifies competitors of the pending or actual patent protection, which may discourage some competitors from copying the invention at least as set forth in the patent (or the patent application).

For some companies, several or all of the above described purposes may inform the pursuit of patent protection. For other companies, only one or two of the above purposes may exist. For example, for a smaller company and particularly for a startup, many if not all of the above purposes may exist. For a larger company in a technical area that is not particularly litigious, the sole purpose for pursing patents may be to protect against competitor assertions of patent infringement in case that technical area becomes litigious later or in case the company is active in other technical areas that are more litigious. Such reasons can inform whether to pursue patent protection, can inform how many resources should be expended, and can provide a benchmark as to whether the patent effort was ultimately successful.

One cautionary note: a patent cannot serve the purpose of providing rights to use an invention. A common misunderstanding is that patents give permission for an inventor to do something with an invention. Rather, a patent provides the patent owner with negative rights: the rights to prevent someone from making, using, selling, offering for sale, and importing an invention. A patent does not provide the patent owner with positive rights such as the right to use an invention. Avoiding the patent rights of others is unrelated to obtaining one's own patent and a separate discussion for another day.

II. ASSESSMENT OF AN INDIVIDUAL INVENTION

Once the particular purposes for pursuing a patent have been determined, the individual invention should be further assessed for potential effectiveness. Pursuing patent protection for all of the right business strategic reasons may not make sense in particular situations. Some of the specific factors to consider for a given invention are patent eligibility, connection of the invention to revenue, difficulty of design around, and detectability of infringement. All of these are discussed below.

Patent eligibility is an area of patent law that presently is in great flux. While the topic may merit a separate full discussion, one punchline is that patent eligibility can be considered along a spectrum: at one end of the spectrum are inventions most likely to be patentable such as customized computer hardware; at the other end of the spectrum are inventions least likely to be patentable such as software for pricing products for sale or software for tracking user's purchases and expenses. A given individual invention can be evaluated as positioned within the spectrum between these two ends of the spectrum and considered for potential patent eligibility or patent ineligibility. No definable bright line separates patent-eligible inventions and patent-ineligible inventions. Rather, some inventions are within a gray zone. Such uncertainty needs to be considered and understood before pursuing patent protection.

Patents can represent an intersection between technology and business, and considering how an invention connects to revenue can be important. When the connection is direct and the revenue meaningful, pursuing patent protection likely makes sense. When the connection is inchoate or the revenue is less meaningful, patent protection likely makes less sense. Being able to articulate this connection to revenue typically helps in the cost-benefit assessment on whether to pursue patent protection. For example, for a single-product company where the invention can be directly attributable to the company's entire revenue such as a startup medical device company, the benefit of patent protection can easily outweigh the cost of pursuing patent protection. For a multiproduct company where the invention relates to small or declining revenue source, the benefit of patent protection may not outweigh the costs. For another example, for an invention that covers a key technology or a technology chokepoint where an alternative commercial product or service is not possible without the invention, the benefit of patent protection can be great. For an invention that covers an ancillary feature such as an optional software feature, patent protection is less compelling.

Patents define the scope of rights for inventions, thus determine the extent to which competitors can possibly avoid patents while providing commercially similar products or services. When the scope of those patent rights are broad, competitors cannot easily design around the patent rights with comparable products and services and thus the desirability of pursuing patent protection is greater. When the scope of those patent rights are narrow, competitors can more easily design around the patent rights, and the desirability of pursuing patent protection is less.

Detectability of infringement is also an important factor when considering whether to pursue patent protection. Some inventions can be easy to observe, for example, when outwardly visible to the end-consumer such as a user interface or an electronics device with outwardly observable features. Other inventions can be difficult to observe, for example, when located in firmware, an applications-specific integrated circuit, source code, or cloud-based software. If a competitor copies a patented invention that is difficult to observe, it can be difficult to know whether to assert the patent rights. In other words, the effectiveness of a patent can be lower if you cannot tell when it is infringed.

III. ADDITIONAL POSSIBLE REASONS TO NOT PURSUE PATENT PROTECTION

Finally, with all of the aforementioned possible reasons for pursuing patent protection, it is worth considering some of the reasons for not pursuing patent protection. Some such reasons can include competing on different bases, a short product life, and certain situations involving open-source software. Each is discussed below briefly.

As discussed above, patents can be considered as a "barrier to entry" to prevent competitors from entering the marketplace. But, other forms of barrier to entry exist separate from patent protection. For example, for some companies in burgeoning industries, being first to market may be a sufficient barrier to entry to prevent later competitors from entering the market. When such alternative barrier to entry exists and is sufficient, patents may be unnecessary.

The product life can also effect the decision on whether to pursue patent protection. Although it is possible to expedite the examination process within the U.S. Patent Office, the average nonexpedited examination time is about three years. For products or services that have a short life, these products or services will run their course before the patent is issued and provides protection. In such a situation, pursuing patent protection may not make sense.

When developing software-based inventions, the inventors need to consider whether to develop and sell the software under an open-source license. Under certain open-source licenses, such software-based inventions are available to others under the open-source license. As such, pursuing patent protection may make less sense in this situation. In other words, when the software-based inventions are available to others under an open-source license, patents cannot exclude competitors that properly use the software-based inventions under the open-source license. In such situations, patent protection, if pursued, can serve more limited purposes, for example, to exclude competitors that use the software-based invention outside the open-source license.

IV. CONCLUSION

As discussed above, the decision on whether it makes sense to pursue patent protection for an invention is multifaceted. It may be helpful to first identify the reasons for possibly pursuing patent protection, and then to next consider the particular factors unique to the invention. At this point, one may have a better understanding on when it makes sense to pursue patent protection and when it does not. ■